

IDT≡CH[®]

Value through Innovation



VersaScan II[™] Barcode Scanner User's Manual

80105502-001 rev.A



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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

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INTRODUCTION

This scanner apply with VersaScan II easy programming decoder, It is specially designed to deliver high-end bar code reading performance at the lowest possible price. The scanner utilizes exceptional decoding technology. One-time settings are easily made by scanning set-up bar codes in this handy user's manual. This bar code scanner uses CCD or optical diode technology which does not have moving parts, provide rugged reliable quality, enables it suit for any harsh environment conditions. Furthermore, the LED illumination light source of scanner provides less harmful beam to human eyes, and more longer product lifetime.

The VersaScan II decoder are mainly applied to the long range barcode scanner.

Notes: (Please contact your distributor for the detail model number.)

GENERAL

This scanner has many settings that can be used to conform the unit to the requirements of a particular application. For most usages, however, the default settings programmed into the unit at the factory are appropriate. It is not recommended that the default settings be changed unless there is a specific need to alter the characteristics of the scanner's performance.



EZ TROUBLESHOOTING

The scanner is easy to install and use. Many problems encountered can be attributed to a wrong setting that has been programmed into the scanner. Before troubleshooting the problem, try this:

1. Unplug the cable from the host computer.
2. Plug the cable back into the host computer.
3. Reset the scanner settings to DEFAULT (Group 1).

. A001\$



If these steps do not resolve the problem, please refer to the troubleshooting table on the next page. If this fails to correct the problem, please consult the troubleshooting section beginning on page 64~66 for further assistance.

Figure 2		
No	Kind of Troubles	Symptoms
1	Computer Type (Group 1)	Scanner seems to be performing as usual, but no data is being output.
2	Interfaces Selections (Group 1)	The scanner does not scan when the trigger is depressed.
3	Setting Procedure have not completed (Setting Need Triple Shot scanning) ----- Group - 4, 5, 8, 9, 17, 18, 19, 20, 22, 23, 25, 31	Most settings require only a single bar code , but a few need several different bar codes to be scanned in order to completely define a setting. They are: 1. Preamble, Postamble (Group 4)(page 14) 2. Accuracy Adjustment (Group 5)(page 15) 3. Customer ID Configuration (Groups 8 and 9)(page 18-19) 4. Min/Max Length (Groups 17, 18, 19, 20, 21, 22, 25) 5. ABC Codabar (Groups 22) 6. CX-Codabar (Groups 22 and 23) 7. Coupling Codabar (Groups 22 and 23) 8. EAN 128 (Group 31)
4	Limitation of length of the bar code	The scanner is reading correctly, except for certain bar codes of a certain length
5	RS232 Protocol Communication setting problem	The scanner appears to be working in the RS-232 interface, but no data is output.
		Solutions
		1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the exact computer type immediately.
		1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the correct interface. The cable needs to match the interface.
		1. Follow the procedures for these settings at the appropriate pages. 2. The scanner will beep three times for an incomplete setting. 3. Scan RESET to try a setting again.
		Reset the Min/Max setting for the bar code symbology affected.
		Ensure the correct RS-232 communication parameters have been set: Baud Rate, Handshaking, Stop Bits, Data Bits, and Parity. These settings must be the same for both the scanner and the host.

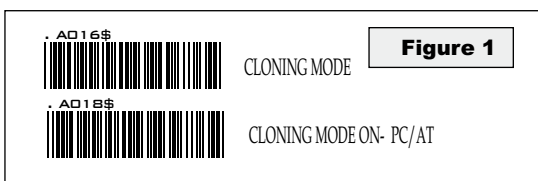
CLONING MODE

WHAT IS CLONING MODE?

CLONING duplicates a wand's settings in other wands. It can save time when a number of wands must be programmed to the same settings.

HOW SHOULD CLONING WORK?

1. Using this guide, make all the necessary settings for one wand.
2. Scan the CLONING MODE bar code shown below.
3. When CLONING MODE is scanned, all setup parameters will be converted to alphanumeric characters and shown on the monitor.
4. Using a bar code printer, print out all the setup parameters as Code 39 bar code labels.
5. Scan the printed labels sequentially with each wand to be programmed.



.A018\$(Cloning Mode on PC/AT) - you can clone the settings to a PC/AT regardless what kind of device has been chosen on the scanner

NOTES:

1. All cloning strings are upper case.
2. All cloning strings printed on labels should be the same as those on the monitor sequentially from first to last.
3. Cloning mode works in Word Note Pad only.
4. Never edit the data on the first row (.A017\$). It is an entry gate for cloning.
5. The cloning string's length can be adjusted by combining multiple strings into one, or by breaking one string to multiple strings starting from the second row after "....". Length must be in sequences of four, such as 4,8,12,16,20 (MAX).
6. Be sure to print the dots exactly where they are shown on the monitor.

FORMAT OF CLONING

* Format of Cloning :

1st rows >>> ".A017\$" (never edit any data of the first row)

2nd rows >>> "....XXXX" you can adjust the String's Length starting from the dots"...." forward. The length of the string should be in 4, 8,12,16 or 20 (MAX)digits.

3rd rows~ so on >>> XXXX

End rows- A dot "." Is an ending of cloning.

XXXX Stand for any String

EXAMPLE :

1. PROJECT ASSIGNMENTS :

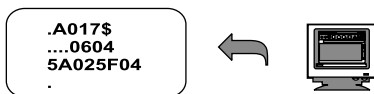
- 1.1. Beep tone: **BEEP LOW -- HIGH .**
- 1.2. Capslock Mode: **CAPSLOCK ON (FIXED).**
- 1.3. Reading Mode: **CONTINUOUS AUTO OFF.**

2. SETTING PROCEDURE:

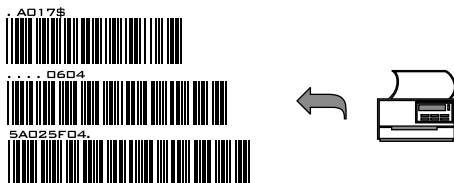
- 2.1. Scan **BEEP LOW.--HIGH (GROUP 3).(page13)**
- 2.2. Scan **CAPSLOCK ON (FIXED).(GROUP 3).**
- 2.3. Scan **CONTINUOUS AUTO OFF. (GROUP2).(page12)**

3. Scan **CLONING MODE (Figure 1).**

All parameters will be covered to alphanumeric characters and shown on the monitor.



4. Print the results shown on the monitor as bar codes with a bar code printer. The bar codes should be in the Code 39 symbology.



5. Scan these labels with any of the wands that must be programmed with the same settings as the first wand. Be sure to scan from the first row to the second and so on sequentially, top to bottom.

CORRECT SETTING

.A017\$ 0604 5A02 5F04 .	4 4 4 4 .(Dot)
.A017\$ 06045A02 5F04.	12 4+.(Dot)

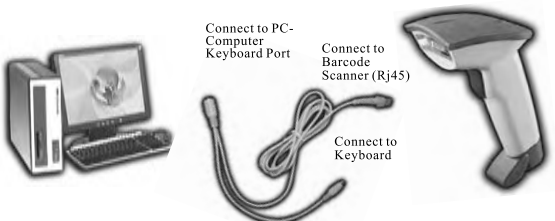
WRONG SETTING

.A017\$ 0604 5A02 5F04 .	«	Wrong Setting: The string"...." Consists of 4 Dots, located at the beginning of second rows, Do not break the "...." Into multiple string.
.A017\$ 06045 A025F04 .	✓ 9 x 7 x } .(Dot) ✓	« Wrong Setting: The string lengths in the second and third rows do not match the length requirements, because rows should be in lengths of four digits.
.A017\$.... 0604 5A02 5F04.	X 4 ✓ 4 ✓ 4+.(Dot) ✓	« Wrong Setting Because you add "" After .A017\$ The 0.A17\$ is a FIXED parameter for setup entering. It is an unchangeable parameter. Never adds, delete or rearrange data from the FIRST row.

HOW TO CONNECT THE SCANNER TO THE HOST TERMINAL: **Handheld Barcode Scanner**

KEYBOARD WEDGE INTERFACE

1. Power down the host computer.
2. Disconnect the keyboard cable from the computer.
3. Connect the "Y" cable between the keyboard and the scanner and the computer.
4. Restart the computer.
5. The scanner will beep.
6. Set the scanner to KEYBOARD interface by referring to GROUP 1 (page 9) (Interface Selections).
7. Scanner will beep to confirm the setting.
8. Scan a bar code to confirm that data shows on the monitor.

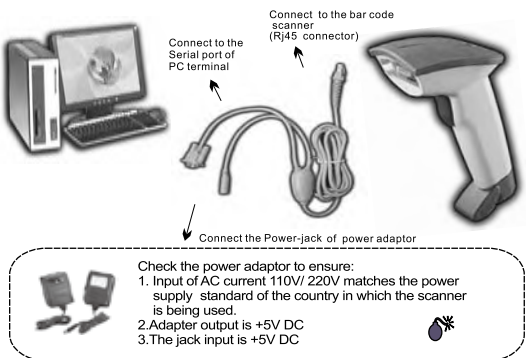


RS-232 INTERFACE

1. Power down the host computer.
2. Connect the RS-232 cable between the scanner and the computer.
3. Connect the power adaptor to the cable.
4. Restart the computer.
5. Plug the power adaptor into a power outlet.
6. The scanner will beep.
7. Set the scanner to RS-232 interface by referring to GROUP 1 (page 9) (Interface Selection).
8. Set RS-232 protocol: Baud Rate, Stop Bits, Handshaking, Data Bits, and Parity.
9. Scan a bar code to confirm that data shows on the monitor.

NOTES:

1. Before plugging the power adaptor into the scanner, be sure the voltage, power consumption, and inner and outer DC characteristics are correct to avoid serious damage to the scanner and/or the computer.
2. Make sure the protocol communication settings of the scanner (such as baud rate, data bits, etc.) match those of the host computer. Otherwise, no data will be transmitted.



USB INTERFACES

The USB Interface supported is compatible with the Apple MAC series, later PCs and Windows 98, 2000, Me, and XP.

1. Connect the USB cable between the scanner and the computer.
2. The scanner will beep.
3. The Scanner will detect the USB driver automatically. (The first time the scanner is connected via the USB port, follow the appropriate instructions for the host computer.)
4. Set the scanner to KEYBOARD/USB interface by referring to GROUP-1 (Interface Selections).
5. Scanner will beep to confirm the setting.
6. Scan a bar code to confirm that data shows on the monitor.

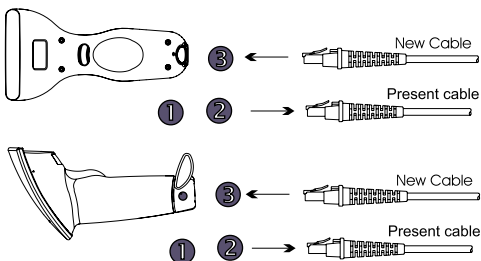


HOW TO CHANGE A CABLE

The VersaScan II is designed to switch easily between interface options. To switch from one interface to another, the appropriate cable must be installed. To change a cable, simply follow these steps:

1. To release the cable, insert a pin or straightened paper clip into the hole at the base of the scanner where the cable is connected.
2. Remove the cable from the scanner.
3. Plug in the new cable.

After changing to a new cable, be sure to reset the interface setting as appropriate (including parameter settings for the RS-232 interface).



HOW TO SET PARAMETERS

How do you program a scanner with this user's guide?

1. Use the scanner to scan at the bar code representing the function/parameter you want to set.
2. When you hear two beeps, the new setting will have been defined or updated into the memory processor.

Default parameters are indicated in bold type and underlined characters. The character font is ARIAL BLACK. CD = Check Digit. CDV = Check Digit Verification.

Most settings require only a single bar code, but a few need several different bar codes to be scanned in order to completely define a setting. They are:



SETTING BAR CODE

Preamble / Postamble (maximum 16 digits)

Step 1: Scan CLR PRE/POSTAMBLE.

Step 2: Scan PREAMBLE or POSTAMBLE..

Step 3: Scan any alphanumeric from Full ASCII Table in Groups 34 - 42 (page 53-61)

Step 4: Scan PREAMBLE or POSTAMBLE.

Min Length / Max Length

Step 1: Scan MIN LENGTH or MAX LENGTH.

Step 2: Scan two digits from Group 42 (page 61)

Step 3: Scan MIN LENGTH or MAX LENGTH.

Accuracy Adjustment

Step1: Scan ACCURACY ADJUSTMENT.

Step 2: Scan one digit from Group 5 (page 15)

Step 3: Scan ACCURACY ADJUSTMENT.

Customer Configuration ID (Example: Code 39)

Step 1: Scan CODE 39 SET ID from Group 8. (page18)

Step 2: Scan either one digits or two digits alphanumeric (maximum 2 digits) from Full ASCII table In Groups 34 - 45. (page53-64)

Step 3: Scan CODE 39 SET ID from Group 8. (page18)

Set A Data - (CX-Codabar, ABC Codabar, Codabar Coupling).

Step1: Scan SET A DATA.

Step 2: Scan one digits any alphanumeric character from Full ASCII Table in Groups 34 - 45. (page53-64)

Step 3: Scan SET A DATA.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan **RESET** to start again.

RESET



GROUP-1

INTERFACES SELECTION, COMPUTER TYPE, DEFAULT

DEFAULT

. A001\$



COMPUTER TYPE

. C004\$



PC-AT

. C007\$



NOTEBOOK*

SYMPTOMS	SOLUTION
Scanner seems to be performing as usual, but no data is being output.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the exact computer type immediately.

Caution: Please ensure the correct computer type is set when the scanner is attached to a new host computer. If set to Notebook, the scanner will operate with no external keyboard.

. C001\$



KEYBOARD& USB

INTERFACES SELECTION

. C002\$



RS232

. C003\$



WAND

SYMPTOM	SOLUTION
The wand does not scan/ The scanner does not scan when the trigger is depressed.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the wand to the correct interface. The cable needs to match the interface.

Caution: This scanner is designed to switch easily between interface options. To switch from one interface to another, the appropriate cable must be installed. After changing to a new cable, be sure to reset the interface setting as appropriate.

GROUP-2

READING MODE SETTING

. F005\$



CONTINUOUS MODE

- * LED is always on. ,
- * The trigger does not function in Continuous Mode.

. F001\$



FLASH MODE

- *The LED is on steadily if a bar code is close to the scanner, but starts to flash if no bar code has been detected after 60 seconds.
- *The trigger does not function in Flash Mode.

. F002\$



TRIGGER MODE

- * The LED will light when the trigger is pressed.
- * The LED will go off when the trigger is released.

. F006\$



CONTINUOUS AUTO OFF

- * The LED is always on when the trigger is pressed .
- * The LED will go off if no bar code has been detected after 60 seconds.

. F003\$



TOGGLE MODE

- * This function works like Trigger Mode, but the scanner beeps to indicate a good read.

. F004\$



TEST MODE

- * Factory Test Scanning

. F007\$



*AUTO SENSING MODE

- * If Auto-Sensing Mode is on, the LED will go off if no bar code is detected after Deactivation Time elapses.(The default is 3 sec.)
- * The LED lights automatically when a BAR CODE is detected.
- * If Auto-Sensing Mode is on, the Magnetic Switch and Green LED will be activated at the same time.

NOTES:

1. To extend the scanner's life, keep the scanner set to Trigger Mode or Continuous Auto Off Mode.
2. The LED will glow RED for STANDBY and GREEN for GOOD READ.
3. The Trigger Mode is available for most handheld bar code scanner, but the trigger is only available to wands with a switch capability.
4. For advanced settings of Auto-Sensing Mode(such as Deactivation Time, Magnetic Switch and Green LED) please refer to the next pages.

GROUP-2

READING MODE SETTING

MAGNETIC SWITCH

. F034\$



MAGNETIC SWITCH ON

. F035\$



MAGNETIC SWITCH OFF

NOTES:

1. The Magnetic Switch is automatically activated when Auto-Sensing Mode is on.
 2. To enable Magnetic Switch, the scanner should be paired with an Auto Stand.
 3. When Magnetic Switch is off, the scanner will start auto-sensing without an Auto Stand.
-

GREEN LED/ SUPPLEMENT LIGHT

. F032\$



GREEN LED ON

. F033\$



GREEN LED OFF

NOTES:

1. The Green LED is automatically activated when Auto-Sensing Mode is on.
2. Green LED serves as Supplement Light for a CCD scanner in order to enhance the sensitivity of scanner in Auto-Sensing Mode.

GROUP-2

READING MODE SETTING

. F030\$



DEACTIVATION TIME

DEACTIVATION TIME

NOTES:

1. The default Deactivation Time is 3 Sec.
2. Deactivation Time is the time interval between the last scan and the automatic deactivation of LED in Auto-Sensing Mode.
3. You can set the Deactivation Time value by the following three steps:

Step 1: scan Deactivation Time

Step 2: scan two digits(Limit Range: 01 ~ 30sec.) from the numeric table below.

Step 3: scan Deactivation Time

FULL ASCII (Code 39) NUMERIC TABLE

0



2



4



6



8



1



3



5



7



9



NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡

. P023\$



GROUP-3

CHECK VERSION, BEEP TONE , TERMINATOR

BEEP TONE MODE

2.1KHz

. F012\$



BEEP OFF

. F013\$



BEEP MEDIUM

. F014\$



BEEP HIGH

. F015\$



BEEP LOW--HIGH

. F016\$



BEEP HIGH--LOW

. F017\$



BEEP LOW

CHECK VERSION

. A007\$



CHECK VERSION

TERMINATOR

. D010\$



NONE

. D013\$



CR+LF

. D011\$



LF

. D014\$



TAB

. D012\$



CR

. D015\$



SPACE

. D016\$



ESC

NOTES:

1. For the Keyboard Wedge interface the default terminator is CR.
2. For the USB interfaces the default terminator is CR,
3. For the RS232 interfaces the default terminator is CR+LF

GROUP-4

SETUP CODE READ, PREAMBLE & POSTAMBLE.

SETUP CODE READ

.B015\$



SETUP CODE ON

.B016\$



SETUP CODE OFF * 1

NOTE :

- * 1 This setting is disable to all User's Manual Code setting. To use bar code setting, Scan Setup Code On enable bar code setting.
-

PREAMBLE & POSTAMBLE (PREFIX AND SUFFIX)

.A011\$



CLEAR PRE/ POSTAMBLE

.A012\$



PREAMBLE (16)

.A013\$



POSTAMBLE (16)

EXAMPLE:

Set PREAMBLE String as " ## "

POSTAMBLE String as " \$\$ "

SETTING PROCEDURE:

STEP 1 : Scan : CLEAR PRE/ POSTAMBLE.

STEP 2 : Scan : PREAMBLE.

STEP 3 : Scan : " # " twice from FULL ASCII Table.

STEP 4 : Scan : PREAMBLE.

STEP 5 : Scan : POSTAMBLE.

STEP 6 : Scan : " \$ " twice From FULL ASCII Table.

STEP 7 : Scan : POSTAMBLE.

FORMAT:

{ Preamble}{CodeID}{Bar Code}{Postamble}

NOTES:

1. A PREAMBLE is a string of up to 16 characters added to the beginning of a scanned barcode.
2. A POSTAMBLE is a string of up to 16 characters added to the end of a scanned bar code.
3. Default value for either: None.

GROUP-5

ACCURACY ADJUSTMENT



ACCURACY ADJUSTMENT



Accuracy Adjustment assures a more reliable decoded output. Enabling the feature and setting a number from 1 to 9 subjects the decoded output a higher standard of accuracy. The higher the number, the greater the accuracy.

SETTING PROCEDURE:

1. Scan **ACCURACY ADJUSTMENT**.
2. Scan one digit (1~9) from barcode menu above.
3. Scan **ACCURACY ADJUSTMENT**.

RESET



NOTES:

1. The scanner will beep three times as reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan **RESET** to start again.

GROUP-6

ENABLE AND DISABLE CODE ID

ENABLE CODE ID

. A008\$



FACTORY ID ON

. A014\$



AIM ID ON

. A015\$



SET ID -ON

DISABLE CODE ID

. A009\$



NOTES:

1. Only ONE code ID will be sent.
2. The code ID is located at the position before the bar code data and after the preamble.

EXAMPLE :

- 1.Preamble 145287,
- 2.Code ID: enable AIM ID,
- 3.Bar code symbologies : EAN 13+5

<u>145287</u>	<u>JE0</u>		
Preamble 145287	CODE ID AIM ID : JE0	BARCODE / DATA EAN 13 +5	
OUTPUT : 145287JE0456398712345312411			

GROUP-7

SYMBOLOGIES CODE ID IDENTIFIER, SET ID

SYMBOLOGIES CODE ID IDENTIFIER					
Symbologies	Factory ID	AIM ID (new)	Symbologies	Factory ID	AIM ID (new)
MSI	O	]M0	EAN 128	T	]C1
MSI(MOD 10 / CDV & not send CD)		]M1	Code 128	K	]C0
EAN8(+2/+5 OFF)	S	]E4	Code 32	B	]X0
EAN8(+2 ON)		]E4	Codabar	N	]F0
EAN8(+5 ON)		]E4	Codabar(ABC Codabar)		]F1
UPC-E(+2/+5 OFF)	E	]E0	Codabar(CDV & Send CD)		]F2
UPC-E(+2 ON)		]E3	Codabar(CDV & not send CD)	P	]F4
UPC-E(+5 ON)		]E3	UK Plessey		]P0
UPC-A(+2/+5 OFF)	A	]E0	Matrix 2 of 5	Y	]X0
UPC-A(+2 ON)		]E3	Full ASCII Code 39(disable CDV)	D	]A4
UPC-A(+5 ON)		]E3	Full ASCII Code 39(CDV & send CD)		]A5
EAN-13(+2/+5 OFF)	F	]E0	Full ASCII Code 39(CDV & not send CD)		]A7
EAN-13(+2 ON)		]E3	Standard Code 39(disable CDV)	M	]A0
EAN-13(+5 ON)		]E3	Standard Code 39(CDV & send CD)		]A1
Code 93	L	]G0	Standard Code 39(CDV & not send CD)		]A3
Code 11(disable CDV)	J	]H0	IATA 2 of 5	R	]R0
Code 11(send one CD)		]H0	Industrial 2 of 5	V	]S0
Code 11(send two CD)		]H1	China Post Code	H	]X0
Code 11(not send CD)		]H3	Interleaved 2 of 5(CDV & send CD)	I	]I1
Telepen(ASCII)	U	]B0	Interleaved 2 of 5(CDV & not send CD)		]I3
Telepen(Numeric)		]B1	Interleaved 2 of 5(disable CDV)		]I0

SET ID - SETTING PROCEDURES

Setting steps:

1. Scan the SET ID bar code for a particular symbology.
2. Scan one or two alphanumeric characters from the Full ASCII Table.
3. Scan the SET ID bar code again.

Example :Define the MSI Code ID = A, Code 93 = G9

MSI :

Step1: Scan MSI Set ID (Group 9). (page19)

Step2: "A" from Group 37.(page56)

Step3: Scan MSI Set ID (Group 9).(page19)

Code 93:

Step1: Scan Code 93 Set ID (Group 8).(page18)

Step2: "G" from Group 38, Scan "9" from Group 42 . (page61)

Step3: Scan Code 93 Set ID (Group 8).(page18)

NOTES:

1. The length of a Code ID is either one or two characters. If one character is set, the Code ID output will be one character. If two characters are set, the Code ID output will be two characters.
2. Only one type of Code ID will be sent.

GROUP-8

CODE ID CONFIGURATION: SET ID

. P001\$



EAN 13 Set ID

. P002\$



EAN 8- Set ID

. P003\$



UPC E Set ID

. P004\$



UPC A Set ID

. P005\$



CODE 39 Set ID

. P013\$



Code 93 Set ID

. P007\$



Codabar Set ID

. P021\$



IATA Set ID

. P010\$



Code 128 Set ID

. P016\$



EAN128 Set ID

. P022\$



Telepen Set ID

. P009\$



Code 11 Set ID

. P011\$



Code 32 Set ID

GROUP-9

CODE ID CONFIGURATION: SET ID

China Post Code
[TOSHIBA Code] Set ID



MSI Code Set ID



UK Plessy Set ID



Matrix 2 of 5 Set ID



Interleave 2 of 5
Set ID



Industrial 2 of 5 Set ID



Full ASCII Code39
Set ID



RSS 14/LIMITED



RESET



1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

GROUP-10

DELAY BETWEEN BLOCKS AND CHARACTERS

INTERBLOCK DELAY

. B001\$ 	<u>0mS</u>
. B002\$ 	10mS
. B003\$ 	50mS
. B004\$ 	100mS
. B005\$ 	200mS
. B006\$ 	500mS

INTERCHARACTER DELAY

. B010\$ 	<u>140uS</u>
. B011\$ 	500uS
. B012\$ 	1mS
. B013\$ 	4mS
. B014\$ 	16mS

GROUP-11

KEYBOARD LAYOUT / CAPLOCK MODE / NUMERIC KEY

KEYBOARD LAYOUT

. C010\$



ENGLISH (USA)

. C018\$



ENGLISH (UK)

. C011\$



GERMAN

. C012\$



FRENCH

. C009\$



JAPAN (106 key only)

. C013\$



SPANISH

. C014\$



ITALIAN

. C015\$



UNIVERSAL CODE

. C016\$



SWISS

. C017\$



CZECH (QWERTY)

CAPITAL LOCK MODE

. A004\$



CAPLOCK ON

. A005\$



CAPLOCK OFF

. A006\$



CAPLOCK FREE

NOTE:

①When Barcode scanner set to Caplock Free mode.No matter of keyboard CapsLock LED indicator is ON or OFF , output will be always the same as the Original barcode. In other words , what you see is what output is.

NUMERIC KEY

. D017\$



NUMERIC KEY

. D018\$



ALPHANUMERIC KEY

GROUP-12

Rs232: BAUD RATE,DATA BITS & PARITY

BAUD RATE

. E001\$



300

. E002\$



600

. E003\$



1200

. E004\$



2400

. E005\$



4800

. E006\$



9600

. E007\$



19200

. E022\$



38400

DATA BITS & PARITY

. E008\$



8 Bits None

. E009\$



8 Bits EVEN

. E010\$



8 Bits ODD

. E011\$



8 bits MARK

. E012\$



8 Bits SPACE

. E013\$



7 Bits EVEN

. E014\$



7 Bits ODD

. E015\$



7 Bits MARK

. E021\$



7 Bits SPACE

GROUP-13

Rs232 : STOP BIT, HANDSHAKING, ACK/NAK, FLOW CONTROL

STOP BITS

. E016\$



1 STOP BITS

. E017\$



2 STOP BITS

HANDSHAKING

. E018\$



NONE

. E019\$



RTS enable at Power on

. E020\$



RTS enable with Communication

ACK / NAK

. E023\$



ON

. E024\$



OFF

FLOW CONTROL: TIME OUT

. E025\$



1 Sec

. E026\$



3 Sec

. E027\$



10 Sec

. E028\$



Unlimited

GROUP-14

WAND EMULATION PARAMETER SETTING

. D001\$



200us

**LEVEL DURATION OF
MINI WIDTH**

. D002\$



600uS

. D003\$



LOW

**POLARITY OF
IDLE CONDITION**

. D004\$



HIGH

. D005\$



Bar High / Space Low

**OUTPUT OF WAND
EMULATION**

. D006\$



Bar Low / Space High

. D007\$



PEN TYPE

WAVE FORM

. D008\$



FULL ASCII CODE 39

GROUP 15~ 33

SYMBOLOLOGIES

FORMATTING

GROUP-15

ENABLE SYMBOLOGIES

. A002\$



ENABLE ALL CODE

. K010\$



CODE 32

. K001\$



CHINA POSTAL CODE

. L010\$



UK PLESSY CODE

. N001\$



INDUSTRIAL 2 OF 5

. M010\$



MATRIX 2 OF 5

. J001\$



INTERLEAVE 2 OF 5

. J010\$



CODE 128

. I001\$



CODABAR

. L014\$



TELEPEN

. H001\$



UPC-A

. H007\$



UPC-E

. H019\$



EAN -8

. H013\$



EAN -13

. L001\$



MSI

. G008\$



CODE 39

. I010\$



CODE 11

. G010\$



CODE 93

. M001\$



EAN-128

. N017\$



IATA

GROUP-16

DISABLE SYMBOLOGIES

. A003\$



DISABLE ALL CODE

. K011\$



CODE 32

. K002\$



CHINA POSTALCODE

. L011\$



UK PLESSY CODE

. N002\$



INDUSTRIAL 2 OF 5

. M011\$



MATRIX 2 OF 5

. J002\$



INTERLEAVED 2 OF 5

. J011\$



CODE 128

. I002\$



CODABAR

. L015\$



TELEPEN

. H002\$



UPC-A

. H008\$



UPC-E

. H020\$



EAN-8

. H014\$



EAN-13

. L002\$



MSI

. G009\$



CODE 39

. I011\$



CODE 11

. G011\$



CODE 93

. M002\$



EAN -128

. N018\$



IATA

GROUP-17

SYMBOLOLOGIES : CHINA POST CODE (TOSHIBA CODE)

**CHINA POSTAL CODE
[TOSHIBA CODE]**

. K001\$



ENABLE

. K002\$



DISABLE

. K003\$



DISABLE CDV

. K004\$



CDV & SEND CD

. K005\$



CDV & NOT SEND CD

. K006\$



MIN LENGTH (11)

. K007\$



MAX LENGTH (48)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0		1	
2		3	
4		5	
6		7	
8		9	

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡

. P023\$



GROUP-18

SYMBOLOGIES : MSI CODE , UK PLESSY CODE

. L001\$



ENABLE

. L002\$



DISABLE

. L004\$



CDV & SEND CD

. L003\$



CDV & NOT SEND CD

. L007\$



CHECK DIGIT DOUBLE
MOD 10

MSI

. L008\$



CHECK DIGIT DOUBLE 11
PLUS MOD 10

. L009\$



**CHECK DIGIT SINGLE
MOD 10**

. L005\$



MIN LENGTH (6)

. L006\$



MAX LENGTH (48)

. L010\$



ENABLE

. L011\$



DISABLE

UK PLESSY CODE

. L012\$



CDV & SEND CD

. L013\$



CDV & NOT SEND CD

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0		1	
2		3	
4		5	
6		7	
8		9	

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡

. P023\$



GROUP-19

SYMBOLOLOGIES: CODE 93, TELEPEN, IATA

. G010\$



ENABLE

. G011\$



DISABLE

CODE 93

. G012\$



MIN LENGTH (6)

. G013\$



MAX LENGTH (48)

. L014\$



ENABLE TELEPEN

. L015\$



DISABLE TELEPEN

TELEPEN

. L020\$



TELEPEN ASCII

. L021\$



TELEPEN NUMBER

. N017\$



ENABLE

. N018\$



DISABLE

. N019\$



DISABLE CDV

. N020\$



CDV & SEND CD

IATA

. N021\$



CDV & NOT SEND CDV

. N022\$



MIN LENGTH (6)

. N023\$



MAX LENGTH (48)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0		1	
2		3	
4		5	
6		7	
8		9	

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡



GROUP-20

SYMBOLOGIES : INTERLEAVE 2 OF 5 , CODE 11.

. J 0 0 1 \$



ENABLE

. J 0 0 2 \$



DISABLE

. J 0 0 3 \$



DISABLE CDV

. J 0 0 4 \$



CDV & SEND CD

. J 0 0 5 \$



CDV & NOT SEND CDV

INTERLEAVE 2 OF 5

. J 0 0 8 \$



First digit suppressed

. J 0 0 9 \$



Last digit suppressed

. J 0 1 4 \$



NO suppressed

. J 0 0 6 \$



MIN LENGTH (6)

. J 0 0 7 \$



MAX LENGTH (48)

. I 0 1 0 \$



ENABLE

. I 0 1 1 \$



DISABLE

. I 0 1 2 \$



DISABLE CDV

. I 0 1 3 \$



CDV & SEND CD

. I 0 4 2 \$



CDV & SEND CD
(1 DIGIT)

CODE 11

. I 0 4 3 \$



CDV & SEND CD
(2 DIGITS)

. I 0 1 4 \$



CDV & NOT SEND CD

. I 0 1 5 \$



MIN LENGTH (6)

. I 0 1 6 \$



MAX LENGTH (32)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0 	1 
2 	3 
4 	5 
6 	7 
8 	9 

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡



GROUP-21

SYMBOLOLOGIES : INDUSTRIAL 2 OF 5, MATRIX 2 OF 5

. N001\$



ENABLE

. N002\$



DISABLE

. N003\$



DISABLE CDV

. N004\$



CDV & SEND CD

INDUSTRIAL 2 OF 5

. N005\$



CDV & NOT SEND CD

. N006\$



MIN LENGTH (6)

. N007\$



MAX LENGTH (48)

. M010\$



ENABLE

. M011\$



DISABLE

. M012\$



DISABLE CDV

. M013\$



CDV & SEND CD

MATRIX 2 OF 5

. M014\$



CDV & NOT SEND CD

. M015\$



MIN LENGTH (6)

. M016\$



MAX LENGTH (48)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0		1	
2		3	
4		5	
6		7	
8		9	

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡



GROUP-22

SYBBOLOGIES: CODABAR

. I 001\$



ENABLE

. I 002\$



DISABLE

. I 005\$



DISABLE CDV

. I 006\$



CDV & SEND CD

CODABAR

. I 007\$



CDV & NOT SEND CD

. I 008\$



MIN LENGTH (6)

. I 009\$



MAX LENGTH (48)

. I 030\$



ST/SP: abcd/abcd

. I 029\$



ST/SP: ABCD/ABCD

. I 031\$



ST/SP: ABCD/TN*E

. I 032\$



ST/SP:abc/tn*e

START / STOP

. I 003\$



SEND START /STOP

. I 004\$



Not Sent START / STOP

Example of ST (Start) / SP (Stop)

123456	Not Transmit ST/SP
A123456B	ST/SP: ABCD/ABCD
a123456b	ST/SP: abcd/abcd
A123456N	ST/SP: ABCD/TN*E
a123456n	ST/SP: abcd/tn*e

. I 027\$



CLSI FORMAT ON

. I 028\$



CLSI FORMAT OFF

CLSI FORMAT

CLSI- Enable library space insertion. If you enable the CLSI format, this option inserts spaces in position 2,7,13of the datastring for use in library systems

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0		1	
2		3	
4		5	
6		7	
8		9	

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡



GROUP-23

SYMBOLOLOGIES: ABC-CODABAR, CX- CODABAR

. I 017\$



ON

. I 018\$



OFF

. I 035\$



SET INSERT DATA*

ABC- CODABAR

. I 039\$



INSERT DATA -ON

. I 036\$



INSERT DATA-OFF

* The data can any alphanumerics of FULL ASCII Table (GROUP 34-42)(page 53-61)

REMARK:

ABC-CODABAR (American Blood Commission.).The ABC Code is an acronym for American Blood Commission. This bar code is a variant of the CODABAR Code developed for the use in the blood bank. This Code consists of two bar codes which are decoded in one read cycle. The code is concatenated when the stop character of the first bar code and the start character of the second bar code is a "D ", these two"D "are not transmitted.

. I 022\$



ON

. I 023\$



OFF

. I 037\$



SET INSERT DATA*

CX CODE- CODABAR

. I 040\$



INSERT DATA -ON

. I 038\$



INSERT DATA-OFF

* The data can any alphanumerics of FULL ASCII Table (GROUP 34-42)(page 53-61)

REMARK:

The CX-Code consists of two bar Codes which are decoded in one read cycle, the code is concatenated when the stop character of the first bar code is a C, and the start character of the second bar code is a B. The B and C characters are not transmitted.

GROUP-24

SYMBOLOLOGIES : CODABAR COUPLING, ADJACENT REQUIRED.

. I 019\$



ON

. I 020\$



OFF

. I 021\$



SET INSERT DATA*

CODABAR COUPLING

. I 041\$



INSERT DATA-ON

. I 026\$



INSERT DATA- OFF

ABC-Codabar and CX-Codabar have certain rules regarding the Stop Character of first bar code and the stop character of Second bar code while in conjunction, while Codabar-Coupling is enabled, the data from any two Codabar bar codes can be coupled into one set of data without any limitations between the Stop character of first bar code and the Start character of second bar code. The Start and Stop characters associated with each bar code each bar code will be sent.

**The data can be any alphanumeric of FULL ASCII Table (GROUP 34-42)(page 53-61)*

ADJACENT REQUIRED

If CODABAR ADJACENT is enabled, the scanner will only read two adjacent Codabar bar codes, A single bar code will not be read.

. I 033\$



ON

. I 034\$



OFF

NOTES:

1. Both ABC-Codabar and CX-Codabar can be enabled together, except when Codabar-Coupling is also enabled.
2. If ABC-Codabar, CX-Codabar, and Codabar-Coupling are all enabled at same time, the scanner will read only Codabar-Coupling, that is, ABC-Codabar, CX-Codabar will be considered coupling formats.

SETTING PROCEDURE - SET INSERT DATA

Step 1- Scan SET INSERT DATA.

Step 2- Scan any combination of alphanumeric characters from FULL ASCII TABLE.

Step 3- Scan SET INSERT DATA.

RESET



NOTES:

1. The scanner will beep three times as reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

GROUP-25

SYMBOLOGIES: STANDARD & FULL ASCII CODE 39, CODE 32

STANDARD CODE 39 & FULL ASCII 39

. G008\$



ENABLE

. G009\$



DISABLE

. G001\$



FULL ASCII CODE 39

ENABLE

. G002\$



FULL ASCII CODE 39

DISABLE

. G014\$



START / STOP - SEND

. G003\$



DISABLE CDV

. G004\$



CDV & SEND CD

. G005\$



CDV & NOT SEND CD

. G006\$



MIN LENGTH (1)

. G007\$



MAX LENGTH (48)

. G015\$



START / STOP Not SEND

NOTE:

The default for Code 39 is Standard Code 39. If Full ASCII Code 39 is enabled, Standard Code 39 will be automatically disabled.

. K010\$



ENABLE

. K011\$



DISABLE

. K012\$



LEADING SEND

CODE 32

. K013\$



LEADING NOT SEND

. K014\$



TAILING SEND

. K015\$



TAILING NOT SEND

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0		1	
2		3	
4		5	
6		7	
8		9	

SETTING PROCEDURE

MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡



GROUP-26

SYMBOLOLOGIES FORMATTING: UPC-E

. H007\$



ENABLE

. H008\$



DISABLE

. H009\$



LEAD DIGIT SEND

UPC-E

. H010\$



LEAD DIGIT NO SEND

. H011\$



CHECK DIGIT SEND

. H012\$



CHECK DIGIT NO SEND

. H037\$



+5 ON

. H038\$



+ 5 OFF

. H039\$



+2 ON

. H040\$



+ 2 OFF

ADD ON SUPPLEMENT

. H047\$



ADD A SPACE ON

. H048\$



ADD A SPACE OFF

. H055\$



ADDENDA REQUIRED OFF

. H056\$



ADDENDA REQUIRED ON

NOTE:

When "addenda required on" is set, the scanner reads bar codes that have addenda only if one or both of "+2 / +5 " is on.

GROUP-27

SYMBOLOGIES: UPC-E SYSTEM NUMBER

UPC E0



UPC E1



NOTE:

Most UPC Bar codes lead with 0 number systems, For these bar codes use UPC E(0) Selection, For the bar codes that lead with the 1 number, use UPC(E1) select

UPC-E EXPAND TO UPC-A



NOTE:

1. If UPC E EXPAND TO UPC A FORMAT set enabled, The output of UPC-A will be 12 digits.
2. The default output of UPC-A is 12 digits, if UPC-A EXPAND TO EAN13 is enabled, a zero will be added to in front of the bar code.

GROUP-28

SYMBOLOGIES FORMATTING: UPC -A



UPC- A



UPC-A EXPAND TO EAN -13



ADD ON SUPPLEMENT



NOTE:

When "addenda required on" is set, the scanner reads bar codes that have addenda only if one or both of "+2 / +5" is on.

GROUP-29

SYMBOLOGIES FORMATTING: EAN 8

. H019\$



ENABLE

. H020\$



DISABLE

. H021\$



LEAD DIGIT SEND

EAN-8

. H022\$



LEAD DIGIT NO SEND

. H023\$



CHECK DIGIT SEND

. H024\$



CHECK DIGIT NO SEND

. H029\$



+ 5 ON

. H030\$



+ 5 OFF

. H031\$



+ 2 ON

. H032\$



+ 2 OFF

ADD ON SUPPLEMENT

. H043\$



ADD A SPACE ON

. H044\$



ADD A SPACE OFF

. H061\$



ADDENDA REQUIRED OFF

. H062\$



ADDENDA REQUIRED ON

NOTE:

When “addenda required on” is set, the scanner reads bar codes that have addenda only if one or both of “+2 / +5” is on.

GROUP-30

SYMBOLOGIES FORMATTING: EAN13 ,ISBN,ISSN

. H013\$



ENABLE

. H014\$



DISABLE

. H015\$



LEAD DIGIT SEND

EAN-13

. H016\$



LEAD DIGIT NO SEND

. H017\$



CHECK DIGIT SEND

. H018\$



CHECK DIGIT NO SEND

. H025\$



+ 5 ON

. H026\$



+ 5 OFF

. H027\$



+ 2 ON

. H028\$



+ 2 OFF

ADD ON SUPPLEMENT

. H041\$



ADD A SPACE ON

. H042\$



ADD A SPACE OFF

. H057\$



ADDEND REQUIRED OFF

. H058\$



ADDEND REQUIRED ON

. H050\$



ISBN OFF

ISBN

. H049\$



ISBN ON

NOTES:

1. When "addenda required on" is set, the scanner reads bar codes that have addenda only if one or both of " +2 / +5 " is on.
2. Either ISBN or ISSN will be considered as an extension of EAN-13, If ISSN or ISBN need to be read , EAN13 must be enabled. If ISSN and ISBN need to be read with addenda, EAN13 must be enabled with ADDENDA REQUIRED set to ON.

. H052\$



ISSN OFF

ISSN

. H051\$



ISSN ON

NOTE :

Both ISSN and ISBN are the extension codes of EAN-13, If scanner is required to read either ISSN or ISBN, Enable EAN-13 must be enabled. Otherwise the scanner will not be able to read the ISSN or ISBN.

GROUP-31

SYMBOLOGIES: EAN/UCC-128, CODE 128

. M001\$



ENABLE

. M002\$



DISABLE

. M003\$



CODE ID ENABLE

. M004\$



CODE ID DISABLE

EAN/ UCC- 128

. M005\$



FUNC 1CHEAR SEND

. M006\$



FUNC 1 CHEAR NOT SEND

. M007\$



DEFINE EAN 128

NOTES :DEFINE EAN 128

The first FNC1 character is translated to Jc1, and the second FNC1 character is translated to an ASCII <GS> character (scan from Group 43-45). (page 62-64)

String format :

C1	DATA CHARACTERS	<GS>	DATA CHARACTERS
----	-----------------	------	-----------------

Setting Procedure:

- 1:Scan DEFINE EAN128.
- 2: Scan ASCII Code (page 61)
- 3: Scan DEFINE EAN128.

CODE 128

. J010\$



ENABLE

. J011\$



DISABLE

. J012\$



MIN LENGTH (5)

. J013\$



MAX LENGTH (48)

GROUP-32

DATABAR (RSS), LIMITED FOR CONTACT/PEN TYPE

.N010\$



Databar-14 / LIMITED
ENABLE

.N011\$



Databar-14 / LIMITED
DISABLE

.N012\$



Databar-14 / LIMITED
CHECK DIGIT SEND

.N013\$



Databar-14 / LIMITED
CHECK DIGIT NOT SEND

.N024\$



Databar-14 / LIMITED
PREFIX SEND

.N025\$



Databar-14/LIMITED
PREFIX NOT SEND

.P024\$



Databar-14 / SET ID

.P019\$



Databar-LIMITED SET ID

GROUP-32

Databar (RSS), LIMITED, EXPANDED

. N032\$



Databar -14 ENABLE

. N034\$



Databar -14 CHECK DIGIT SEND

. N036\$



Databar -14 PREFIX SEND

. N038\$



Databar-14 STACKED ENABLE

. P024\$



Databar -14 SET ID

Databar (RSS-14)

. N033\$



Databar-14 DISABLE

. N035\$



Databar-14 CHECK DIGIT NOT SEND

. N037\$



Databar-14 PREFIX NOT SEND

. N039\$



Databar-14 STACKED DISABLE

. N010\$



Databar-LIMITED ENABLE

. N012\$



Databar -LIMITED CHECK DIGIT SEND

. N024\$



Databar-LIMITED PREFIX SEND

. P019\$



Databar -LIMITED SET ID

Databar (RSS LIMITED)

. N011\$



Databar-LIMITED DISABLE

. N013\$



Databar-LIMITED CHECK DIGIT NOT SEND

. N025\$



Databar-LIMITED PREFIX NOT SEND

. N026\$



Databar-EXPANDED ENABLE

. N028\$



Databar-EXPANDED STACKED ENABLE

. N030\$



Databar-EXPANDED MIN LENGTH

. P020\$



Databar-EXPANDED SET ID

Databar (RSS-EXPANDED)

. N027\$



Databar-EXPANDED DISABLE

. N029\$



Databar -EXPANDED STACKED DISABLE

. N031\$



Databar -EXPANDED MAX LENGTH

GROUP-33

SYMBOLOLOGIES: PDF417

.G021\$



PDF417 Enable

PDF417

.G022\$



PDF417 Disable

.B026\$



Idle Mode On

IDLE MODE

.B027\$



Idle Mode Off

.B028\$



Idle Entry Mode Time

NOTES:

1. Idle Mode is only supported by certain models.
2. When Idle Mode is on, the scanner will enter idle state to save power if there is no activity after Idle Entry Mode Time elapses (the default is 1 min).
3. You can set the value of Idle Entry Mode Time by the following three steps:

Step 1: scan Idle Entry Mode Time

Step 2: scan one digits(Limit Range: 1~9 Min.) from the numeric table below.

Step 3: scan Idle Entry Mode Time

FULL ASCII (Code 39) NUMERIC TABLE



0



1



2



3



4



5



6



7



8



9

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

RESET ➡

.P023\$



GROUP-34

FULL ASCII TABLE (CODE 39)

%U



NUL

\$A



SOH

\$B



STX

\$C



ETX

\$D



EOT

\$E



ENQ

\$F



ACK

\$G



BEL

\$H



BS

\$I



HT

\$J



LF

\$K



VT

\$L



FF

\$M



CR

\$N



SO

\$O



SI

GROUP-35

FULL ASCII TABLE (CODE 39)

\$P



DLE

\$Q



DC1

\$R



DC2

\$S



DC3

\$T



DC4

\$U



NAK

\$V



SYN

\$W



ETB

\$X



CAN

\$Y



EM

\$Z



SUB

%A



ESC

%B



FS

%C



GS

%D



RS

GROUP-36

FULL ASCII TABLE (CODE 39)

%E

US


SP

/ A

!

/ B

"

/ C

#

\$

\$

%

%

/ F

&

% G

<

% F

;

/ Z

:

% H

=

% I

>

% J

?

% V

@

GROUP-37

FULL ASCII TABLE (CODE 39)



GROUP-38

FULL ASCII TABLE (CODE 39)



GROUP-39

FULL ASCII TABLE (CODE 39)



GROUP-40

FULL ASCII TABLE (CODE 39)



GROUP-41

FULL ASCII TABLE (CODE 39)



GROUP-42

FULL ASCII NUMERIC TABLE (CODE 39)



0



1



2



3



4



5



6



7



8



9

GROUP-43

FUNCTION CODE TABLE (CODE 39)

\$T A



F1

\$T B



F2

\$T C



F3

\$T D



F4

\$T E



F5

\$T F



F6

\$T G



F7

\$T H



F8

\$T I



F9

\$T J



F10

\$T K



F11

\$T L



F12

\$T M



Home

\$T N



End

GROUP-44

FUNCTION CODE TABLE (CODE 39)

\$T Q



Cursor Right

\$T P



Cursor Left

\$T Q



Cursor Up

\$T R



Cursor Down

\$T S



Page Up

\$T T



Page Down

\$T U



Tab

\$T V



Back Tab

\$T W



Esc

\$T X



Enter

\$T Y



BS

\$T Z



Ins

\$T %K



Del

GROUP-45

FUNCTION CODE TABLE (CODE 39)

\$T%L



Alt (Left) make*1

\$T%M



Alt (Left) break

\$T%N



Shift (Left) make *2

\$T%O



Shift (Left) break

\$T%W



Ctrl (Left) makek *3

\$T+A



Ctrl (Left) braek

\$T+D



Enter (Numeric Key)

For UK Keyboard Special Character

\$T+B



⏏

\$T+C



£

Note:

- *1. "Alt(left)Make" is programmed, please scan "Alt(left)Break" to resume barcode setting.
- *2. "Shift(left)Make" is programmed, please scan "Shift(left)Break" to resume barcode setting.
- *3. "Ctrl(left)Make" is programmed, please scan "Ctrl(left)Break" to resume barcode setting.



GROUP- 46

TROUBLE SHOOTING

The VersaScan II is simple to install and use. Most operational problems can be attributed to:



INCORRECT INTERFACE CONNECTION
INCORRECT CONFIGURATION SETUP
POOR BAR CODE QUALITY

GENERAL PROCEDURES

1. First, make sure the scanner is firmly connected to the host computer, when attached correctly, the scanner will emit one long beep. When the trigger is pressed, LED will flash.
2. Once the power is on, try scanning some sample bar codes from this user's guide. The scanner should beep and the LED should flash to indicate a good read in the default configuration . If reading the bar code does not result in a good read, there may have been a problem with the scanning technique or the interface configuration setting. Reset the scanner to default.
3. If the scanner indicates a good read, but no output of data to the monitor, please check the cabling connection.

KEYBOARD INTERFACES PROBLEMS.

In general, the Keyboard Wedge interface is trouble free, but there still are some things to check in the event of a problem.

Do you have the correct cable?

Most computers use an XT/AT-compatible keyboard. Be sure you have the proper cable for your computer.

Does the keyboard work?

Since the keyed-in data from keyboard must pass through the decoder, the cabling connections are correct if the keyboard is functioning.

Can your computer accept the data fast enough?

Your computer's BIOS has a feature related to keyboard typing speed. Try to set the Intercharacter Delay feature to stimulate the keystroke entry speed.

Does keyboard port supply enough power ?

Most notebook computers do not supply enough power to the scanner. The symptom of insufficient power is a lower "good read" rate (since there is not enough power to properly support the scanning operation).



GROUP-47

TROUBLE SHOOTING

RS232 INTERFACE PROBLEMS

Once you read bar code, there is no output on the monitor: the symptoms may be caused by:

1. Does the hand shaking you have set for the protocol of RS232 like Baud rate, data bits, parity and handshaking etc. of a scanner to match the PC terminal setting? Solution: reset the above mentioned RS232 protocol of scanner to match to PC protocol.
2. Check if the cable pinout assignment of bar code match to the pinout assignment of PC terminal?

No power supply to scanner;

1. Is the correct power adapter connected to the scanner?
2. Does scanner cable have the right pinout which match the PC -terminal?

INTERFACE PROBLEMS

Are you using the Wand Emulation mode with Code 39 output? If so, is your decoder set to accept Code 39 data?

Check the scanner's configuration setting to make sure it can accept the bar code symbology you are trying to read.

Although the cable seems to connect properly, does the scanner not send data to the host computer?

There are no industrial standards for scanner interface cables, so even if they look alike and have similar connector, they might not be alike. For example, cables for Keyboard Wedge and Wand Emulation are similar, but they are not interchangeable due to different pin assignments. Be sure the cable you are using attaches correctly to the matching connector.

CONFIGURATION SETUP

Are you setup for the right Interface?

Are you set up for the right interface? Did you select the Keyboard Wedge cable but set the scanner for RS-232 or Wand Emulation? Or did you change the Keyboard cable to RS-232 but forget to set the scanner interface to RS-232 as well? Set the scanner to its default settings, then select the correct interface based upon the cable and input you are using.

Symptom ----The LED lighting is stuck, and no function at all, even triggered the scanner.

Solution ---- Set the Scanner to Default condition, and choose the right interfaces



GROUP-48

TROUBLE SHOOTING

Is the proper symbology enabled?

Each bar code symbology can be individually enabled or disabled. It is suggested that you enable only those that you will be scanning, thereby eliminating the possibility of misreads from the scanning of other symbologies.

Does the selected the bar code symbology configuration match the bar code(s) being read?

Scanned data from each bar code symbology can be restricted to eliminate the scanning of unused symbologies. The restrictions are individually set for each symbology.

POOR BAR CODE QUALITY

The third problem area has nothing to do with the scanner, but rather the printed quality of the bar code and/or the scanning technique employed.

TOLERANCE OF BAR CODE

A bar code may have a tolerance. Normally, the tolerances are caused by bar code font software or a printer. Software with a proven reputation should be chosen to generate bar codes. If the printed bar codes are distorted, the scanner might not recognize them.

It is very difficult to get a good read from a poor quality bar code unless it is scanned many times. As the quality of the symbology drops, the chances for undetected error increase. A bar code Check Digit Verification (CDV) should be used to check the quality of the suspect bar codes.

LABELS (PAPER & COLOR & PRINTER)

The light source of a bar code scanner is generally red, so there are some restrictions for the printing of labels. Care should be taken when choosing materials, especially color inks and papers. Sometimes the combination of the label color and the color of the ink can, in effect, blind the scanner. Media with a shiny surface will also cause reading difficulties for scanners.

Moreover, poor printing quality can also result in reading difficulties for the scanner. Bad printing may be caused by the type of printer used; dot matrix and inkjet printers will not produce high quality bar codes. Also check to make sure the ink, ribbon, or toner in good supply.

APPENDIX 1

DEFAULT TABLE 1

CROUP		PARAMETER	DEFAULT
1		Computer Type	PC-AT
		Interfaces	*
		Scan speed	45 scans
2		Reading Mode	Trigger
3		Beep Tone Mode 2.1k	Beep Medium
		Terminator	CR+LF, CR
4		Setup code read	Setup up code on
		Preamble & Postamble	Off
5		Accuracy Adjustment	2
6~9		Enable & Disable Code ID	Off
10		Interblock Delay	Oms
		Inter-character Delay	140us
11		Keyboard Layout	English(USA)
		Capital Lock Mode	Caplock Off
		Numeric Key	Alphanumeric Key
12		Baud Rate	9600
		Data Bits & Parity	8 Bit None
13		Stop Bits	1 stop bit
		Handshaking	None
		ACK/NAK	Off
		Flow Control TimeOut	1 Sec
14		Level dutation of Mini Width	200us
		Polarity Of Idle Condition	High
		Output of Wand Emulation	Bar High/Space Low
		Wave Form	Full ASCII 39
15~16		Enable and Disable Symbologies	
		Code 32	Disable
		China Postal Code	Enable
		UK Plessy Code	Disable
		Industrial 2 of 5	Disable
		Matrix 2 of 5	Disable
		Interleave 2 of 5	Enable
		Code 128	Enable
		Cadabar	Enable
		Telepen	Disable
		UPC-A	Enable
		UPC-E	Enable
		EAN-8	Enable
		EAN-13	Enable
		MSI	Disable
		Code 39	Enable
		Code 11	Enable
		Code 93	Disable
		EAN-128	Enable
		IATA	Disable
17		China Post Code	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	11 digits
		Max Length	48 digits
18	1	MSI	
		Enable/Disable	Disable
		Check Digits	CDV & send CD
		Check Digits Mode	Single MOD 10

* The interface setting of scanner does not have certain default value, the default of interface of scanner will be set according to customer order.

APPENDIX 1

DEFAULT TABLE 2

CROUP		PARAMETER	DEFAULT
18	2	UK Plessy	
		Enable/Disable	Disable
		Check Digits	CDV & not send CD
19	1	Code 93	
		Enable/Disable	Disable
		Min Length	6 digits
		Max Length	48 digits
	2	Telepen	
		Enable/Disable	Disable
		Telepen ASCII /Number	ASCII
	3	IATA	
		Enable/ Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
20	1	Interleave 2 of 5	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		First/ last digit suppressed	No suppressed
		Min Length	6 digits
		Max Length	48 digits
	2	Code II	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	32 digits
21	1	Industrial 2 of 5	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
	2	Matrix 2 of 5	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
22	1	Codabar	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
		ST/SP:abcd/abcd, abcd/tn*e, ABCD/ABCD,ABCD/TN*E	ABCD/ABCD
		Start(ST)/Stop(SP)send	Send
		CLSI Format	ON
23	1	ABC-Codabar	
		ON/OFF	Off
		Insert Data	Off
	2	CX-Codabar	
		Insert Data	Off
		ON/OFF	Off
24		Codabar-Coupling	
		ON/OFF	Off
		Insert Data	ON
		Adjacent Required	Off
25	1	Code 39	
		Full ASCII 39 Enable/Disable	Enable
		Check Digits	Disable CDV
		Start/Stop	Not Send
		Min Length	1 digits
		Max Length	48 digits
	2	Code 32	
		Enable/Disable	Disable
		Leading send/not send	send
		Tailing Send / Tailing not send	Tailing Send

APPENDIX 1

DEFAULT TABLE 3

CROUP		PARAMETER	DEFAULT
26		UPC-E	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
27		UPC-E Systems number	
		UPC E(0) On/Off	On
		UPC E(1) On/Off	Off
		UPC-E expand to UPC-A	Disable
28		UPC-A	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
		UPC-A EXPAND TO EAN-13	
		Enable / Disable	Disable
29		EAN-8	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
30		EAN-13	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
		ISSN On/Off	Off
		ISBN	Off
31	1	EAN/UCC128	
		Enable/Disable	Enable
		Code ID	Disable
		Func I Chear send	Not Send
	2	Code 128	
		Enable/Disable	Enable
		Min Length	5 digits
		Max Length	48 digits
32		Rss-14	Disable
		Rss-14 Check digit	Not Send
		Rss-14 Prefix	Not Send
		Rss-Limited	Disable
		Rss-Limited Check Digit	Not Send
		Rss-Limited Prefix	Not Send

Appendix 2

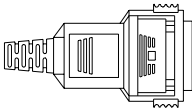
Cable Pin Assignment

INTERFACES:

1. TTL , Wand Emulation

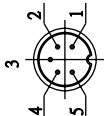
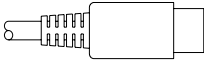
1.1) AMP (D-Sub 9Pin):

Pin	Signal
2	Data
7	GND
9	+5VCC



1.2) Din 5 male (240 degree):

Pin	Signal
1	+ 5Vcc
2	Data
3	GND
4	N/A
5	N/A

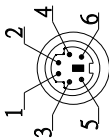
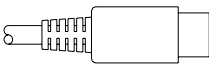


2. Keyboard Interface:

Type of connector:

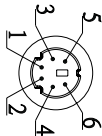
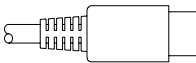
2.1) PS/2 Mini Din6 Female:

Pin	Signal
1	PC Data
2	NC
3	GND
4	+5Vcc
5	PC-Clk
6	NC



2.2) PS/2 Mini Din6 Male:

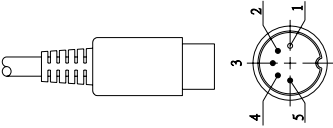
Pin	Signal
1	KB- Data
2	NC
3	GND
4	+5Vcc
5	KB-CLK
6	NC



Type of connector:

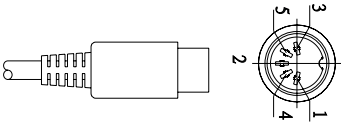
2.3) PC-AT : Din 5 Male :

Pin	Signal
1	KB-Clk
2	KB-Data
3	NC
4	GND
5	+5VCC



2.4) PC-AT : Din 5 Female

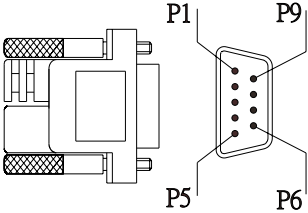
Pin	Signal
1	PC-Clk
2	PC-Data
3	NC
4	GND
5	+5VCC



3.RS232 Interfaces:

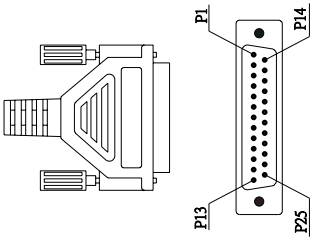
3.1) DB9F

Pin	Signal
2	TXD(Out)
3	RXD(In)
5	GND
7	CTS(In)
8	RTS(Out)
9	+5Vcc



3.2) DB25F

Pin	Signal
2	RXD(In)
3	TXD (out)
4	CTS (In)
5	RTS (Out)
7	GND
16	+5VCC
25	+5VCC



Appendix 3

BAR CODE TEST CHART

DENSITY	NARROW mm(mil)	WIDE mm(mil)	CHAR.GAP mm(mil)	N/W RATIO
MEDIUM DENSITY	0.25(10)	0.625(25)	0.25(10)	1/2.5

MEDIUM DENSITY

NW-7
(CODABAR)



B-\$/+.+00123B

CODE-39



CODE-39 TES

Interleaved
2of5



9876543210

UPC



0 31323 12078 6

EAN



4 712567 014012

Appendix 3

BAR CODE TEST CHART

LOW DENSITY



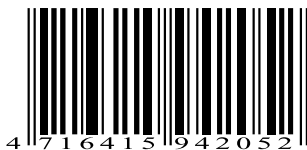
C9876543210D



CODE-39 TEST



0012345690



4716415942052



071589812308

Appendix 4

Special Setting code Table

.A021\$



For PC-AT

- (a) Preamble: @
- (b) Postamble:
Ctrl_make+CR+LF
+Ctrl_break
- (c) Enable Code 39
and Code 128

.A022\$



For Mac

- (a) Preamble: @
- (b) Postamble:
(Numeric Pad) Enter
- (c) Enable Code 39
and Code 128

.A023\$

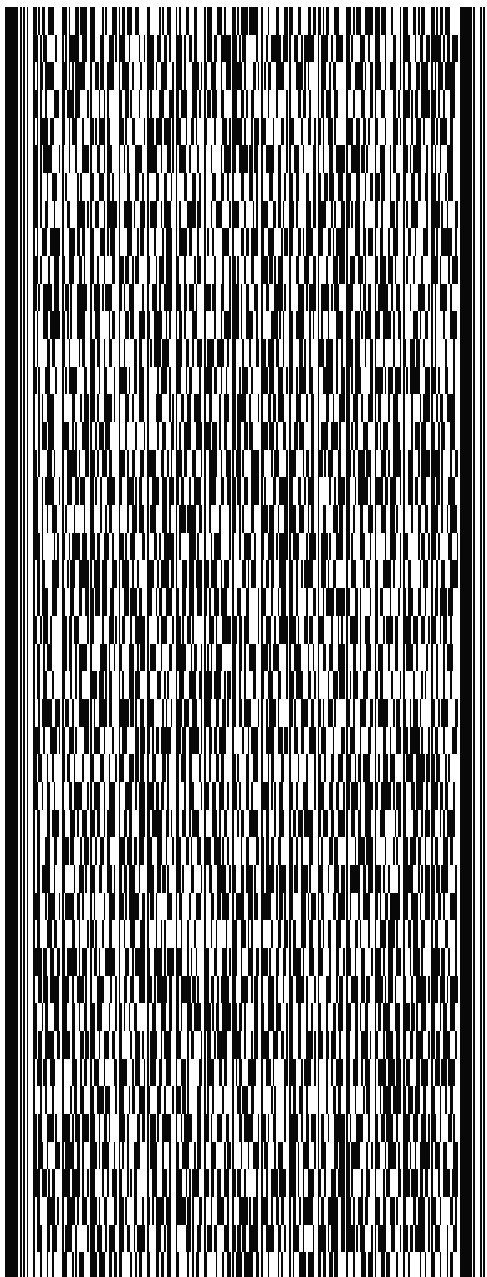


- (a) Preamble: @
- (b) Postamble:
Ctrl_make + Enter
(Key Code:00 28)
+Ctrl_break
+LF(key code:01 0D)
- (c) Enable Code 39
and Code 128

Appendix 5

PDF417 Demo Chart

LV8:



ID TECH

10721 Walker Street
Cypress, California 90630
(714)761-6368

<http://www.idtechproducts.com>